

## **REMARKS**

Applicant has reviewed the Office Action mailed August 25, 2005. Claims 43 through 61 are added by this Response. Thus, claims 1, 3-9, 11-14, 18-21, and 43-61 are pending in the application. Applicant hereby requests further examination and reconsideration of the application in view of the following remarks.

No new matter is being added by claims 43-61. Support for claims 43-61 may be found throughout the specification, and particularly in Figure 7 and in paragraph 35 through paragraph 39 of the specification.

In general, US Patent 6,047,274 (hereinafter "Johnson") discloses that residential customers have fairly predictable usage profiles and patterns. However, Johnson relies on this assumption to presuppose that energy usage is relatively consistent and, based upon this consistency, energy providers may effectively compete to provide energy to end users through an auction system. In this energy auction service, a bidding moderator receives bids from the competing suppliers of the rate each is willing to charge a particular end user for estimated quantities of electric power or gas supply. Each supplier receives competing bids from the moderator and has the opportunity to adjust its own bids, e.g., to reflect capacity utilization.

US Patent 6,021,402 (hereinafter "Takriti") discloses a risk management system for power providers that involves forecasting energy needs in the context of power-trading. This system is directed to the scheduling of operation of generating units of an electric utility taking into account load forecast to be met, fuel prices, different scenarios and different time frames.

"Forecasting load-duration curves" by Bruce et al (hereinafter "Bruce") discusses the forecasting of electricity load duration curves (i.e., the distribution of loads over a given period of time). Bruce focuses on the macro-scale electricity provider environment, for example countries such as New Zealand, and this forecast modeling allows for the prediction of electrical loads at different time intervals across several electrical power generation facilities.

In contrast to the cited prior art, the instant invention is directed to monitoring and

predicting a consumer's utility usage based upon actual variations in usage by the individual consumer and, from this real-time data, making an optimal consumption determination from a plurality of utility provider/power sources based upon a price baseline determined at least in part as a percentage of a forecast load which will be met by each of the plurality of utility provider/power sources, as recited in claims 1 and 44 of the instant application.

***Claim Rejection -- 35 U.S.C. §103***

Claims 1, 3-9, 11-14 and 18-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson in view of Takriti in view of Bruce. For the reasons stated above and those that follow, Applicant respectfully traverses this rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not be based on the applicant's disclosure. MPEP §2142 and *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP §2143.03, *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). See also *In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970). The Examiner states on Page 5 of the Office Action that Johnson and Takriti fail to teach: (1) the claimed forecasting a forecast load, wherein said forecasting includes the steps of creating a current load shape from said metering data, and comparing the current load shape to a load shape from a prior time period based on historical data; and (2) the claimed as a function of the forecast load and a percentage of the forecast load which will be met by each of the one or more sources of power. The Examiner then offers Bruce to cure these defects.

The Examiner states that Bruce teaches a new method for forecasting electricity load-duration curves that estimates sample moments obtained from historical data for a particular time period, in this case a week (see: paragraph 3, 8 and abstract). Bruce further teaches a load-duration curve defined over a period of a week that includes significant variation due to weather, holidays, etc. (see: paragraph 8). In addition, Bruce teaches a performance of forecast models in Fig. 4 where combined forecasting is compared to actual data and preliminary evaluations to determine whether load curve forecasting procedures are consistently producing good forecasts over different periods of data, and whether they are good enough to be incorporated into a production system (see: paragraph 54).

Even assuming, *arguendo*, that the above statements are valid, nowhere does the prior art of record disclose or suggest forecasting a “forecast load and a percentage of the forecast load which will be met by each of the one or more sources of power.” as recited by claim 1 of the instant application. None of the prior art of record, namely, Johnson, Takriti, or Bruce, either alone or in combination with one another teach, disclose, or suggest the determination and delivery of an optimal consumption decision through the use of one or more power sources in combination and that the decision is based, at least in part, on a percentage of the power being supplied by each of the one or more power sources being utilized, as is required by claim 1 and described throughout the specification of the instant application.

The Examiner states that Johnson fails to teach (1) the claimed optimal consumption decision is calculated using an optimal cost curve derived from an optimization algorithm applied to the pricing data and forecasting load; and (2) the claimed forecasting a forecast load based on the received metering data from the utility meter, wherein said forecasting includes the steps of creating a current load shape from said metering data, and comparing the current load shape to a load shape from a prior time period based on historical data. The Examiner offers Takriti to cure this defect stating that Takriti teaches a computer implemented risk-management system for electric utilities that allows a user to generate multiple load forecasts according to the variation in fuel prices to meet the electric demand of customers at a minimal cost. Further, the Examiner states that Takriti teaches a cost function for generating electricity from a

generator as well as solving a stochastic unit commitment problem by assuming the given cost curve and independent and algorithm to determine the lowest price of electricity needed to meet customer demand. From this, the Examiner argues the failings of Johnson are cured and the recited elements of the instant invention are rendered obvious by the combination of Johnson and Takriti. For the reasons stated above, applicant respectfully traverses.

The claimed optimal consumption decision is reached, at least in part, from a determination of “a percentage of the forecast load which will be met by each of the one or more sources of power,” as recited in claim 1. The prior art of record does not disclose, teach, or suggest the factoring in of the use of multiple power sources for providing forecast load modeling that will allow a user to reach an optimal consumption decision as recited in the claims and described in the specification of the instant application. Further, the prior art of record does not disclose, teach, or suggest that the price baseline shall be based at least in part upon a determination of percentages, wherein a determination is made as to the percent of the total power supplied that will be supplied by each of the multiple power sources.

Appl. No. 09/267,176

Reply to: Office Action of August 25, 2005

Title: METHODS AND APPARATUS FOR A UTILITY PROCESSING SYSTEM

### CONCLUSION

In light of the forgoing, reconsideration and allowance of the claims is earnestly solicited. Accordingly, notification to that effect is earnestly requested. In the event that issues arise in the application which may readily be resolved via telephone, the Examiner is kindly invited to telephone the prosecuting attorney, identified below, at (410) 347-8754 to facilitate prosecution of the application.

Respectfully submitted,  
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By:



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